

REMARKS

A. Priority

The Office Action explains that Applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Japan on Friday, October 15, 1999 could not be made since the United States application was filed on October 16, 2000, more than twelve months thereafter.

Applicants respectfully point out that twelve months after the Japanese filing date of October 15, 1999 is October 15, 2000. Applicants further point out that October 15, 2000 was a Sunday, and therefore the twelve month cut-off date for claiming priority was rightly extended to the following business day, i.e. Monday, October 16, 2000. This is in accordance with:

MPEP 710.05

(b) When the day, or the last day, for taking any action or paying any fee in the United States Patent and Trademark Office falls on Saturday, Sunday, or a Federal holiday within the District of Columbia the action may be taken, or the fee paid, on the next succeeding secular or business day.

and

37 CFR 1.7

(a) Whenever periods of time are specified in this part in days, calendar days are intended. When the day, or the last day fixed by statute or by or under this part for taking any action or paying any fee in the United States Patent and Trademark Office falls on Saturday, Sunday, or on a Federal holiday within the District of Columbia, the action may be taken, or the fee paid, on the next succeeding business day which is not a Saturday, Sunday, or a Federal holiday. See §1.304 for time for appeal or for commencing civil action.

(b) If the day that is twelve months after the filing date of a provisional application under 35 U.S.C. 111(b) and §1.53(c) falls on Saturday, Sunday, or on a Federal holiday within the District of Columbia, the period of pendency

shall be extended to the next succeeding secular or business day which is not a Saturday, Sunday, or a Federal holiday.

B. Title

The Title was objected to for not being descriptive. Specifically, the Office Action requested that a recitation for a "control device" be added to the title. Applicants thank the Examiner for noting this oversight, and have amended the title accordingly.

C. Specification

The specification was objected to for various grammatical and idiomatic issues. The specification has been amended to address these issues.

D. Claim Rejections

Claims 1-23 are presented for examination. Claims 1, 2, 8, 10, 13, 19, 20, 21, and 22 are currently amended. No claims are deleted.

The claims are amended to better recite claim limitations.

Claims 1-23 were rejected under 35 U.S.C. 102(b) or U.S.C. 103(a) in view of Akiyama et al. (U.S. Pat. 5,594,653) and further in view of Fukano et al. (U.S. Pat 6,132,117) and Manglapus et al. (U.S. 6,219,151).

In regards to claim 1, Applicants respectfully point out that Akiyama et al. do not show a printer characterized by having a clearing means that is responsive to the printer's state detection means, and that automatically clears the printer's receive buffer in response to detection of the printer being in a state where received data is not printed.

Rather, Akiyama et al. teach that determination of whether the data in the printer's receive buffer is cleared or not is made by the host computer, and not by the printer itself. Akiyama et al. explain that when the printer detects an offline error, a message is sent to the host computer informing it that the printer

cannot accept more print data (col. 9, lines 46-60). The host computer can then interrogate the printer to ascertain what type of error is causing the problem, and thereby determine if it is appropriate to resume printing after recovery from the error without clearing the receive buffer or if it is required that the receive buffer first be cleared (col. 1, lines 33-34). If printing can resume without clearing the receive buffer, then the host computer will send a first real-time command (Col. 9, line 61 to col. 10, line 4). But if it is necessary to first clear the buffer, then the host computer will send a second real-time command (Col. 10, lines 5-11). Akiyama et al. describe various situations where the host computer may want to clear the printer's receive buffer following an error and various situations where the host computer may not want to clear the printer's receive buffer following an error.

The point is, however, that the decision to clear or not clear the printer's received buffer is:

- (1) Not made upon detection of the error; the host computer must first interrogate the printer about the type of error that caused the printing operation to stop and then make a decision as to how to proceed after the error is resolved, and
- (2) The printer itself cannot decide whether to clear its receive buffer upon detecting its error, the decision is made by the host computer after the printer has informed the host computer about the error, and if the host computer decides that the received buffer should be cleared, then the received buffer is cleared only after the printer's error has been fixed (i.e. the paper jam fixed, the money drawer closed, etc).

In regards to claim 2, the Office action appears to be confusing the difference between a controller's internal mode setting register with a controller's command receiving registers. That is, the Office Action rightly explains that the Akiyama et al.'s printer can clear its receive buffer in response to receiving a Clear Buffer command from its host computer (Col. 15, lines 46-

49). However, this is fundamentally different from a controller's mode setting bits, as they are understood in the art.

A controller's mode setting bits determine how the controller will respond to various situations (i.e. they determine the operation mode of the printer in response to various situations). In the present case, when a printer in accord with the present invention detects a print error (i.e. when it enters the first state), it will enter an error handling mode that will includes various automatic response operations (some of which are enabled or disabled by previously set/unset mode setting bits). For example, a printer's mode setting may determine whether the printer responds to the detected printer error by notifying a host computer, displaying an error message (on integrated LEDs or an integrated screen), or both.

In the present case, claim 2 requires that the printer have a data handing mode setting that determines whether the printer will automatically clear its receive buffer upon detection of a print error. To remove any unintended ambiguity, claim 2 has been amended to better recite that the data handing mode is read in response to the printer entering the first state (i.e. in response to detection of a print error, as is explained in the specification of the present application).

Claim 3 specifies that the data handling mode that is automatically read in claim 2, can be set or unset by the host computer. As it would be understood, this data handling mode may be Set prior to detection of any print error so that the printer will know how to automatically respond to entering the first state. That is, the printer of the present invention does not clear its receive buffer in response to the host computer sending it the "specific control command" to set its data handling mode. Rather, the printer does not respond to the set data handling mode until it detect that it entered the first state. This is in direct conflict with the teachings of Akiyama et al, which teach a real-time Clear Buffer command, and thus require that their printer clear its receive buffer upon receiving the Clear Buffer command.

Claims 4 and 12 were further rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enabling requirement. Specifically, the Office Action states that in the application, "data discarding means is distinguished from clearing means of claim 1, that clears data that resides in the receive buffer. Data sent by the host computer is not said to reside in the printer RAM. As a result, there is no means given to discard data that has never been properly received and stored."

This objection appears to arise from a misunderstanding of the use of the term "discarding", and perhaps from confusing the "data discarding means of claims" 4 and 12 with the "data destroy" mode/means described in the specification of the present application. The "data destroy" operation described in the specification encompasses several methods of getting rid of data. In accordance with the specification, data can be "destroyed" by:

- (1) discarding received data (i.e. controlling the buffering of data received from the host computer so that newly received data is not stored into the receive buffer when the printer is off-line [page 6, lines 32-34 and page 7, lines 38-39]); and
- (2) clearing the buffer, which can be accomplished by (A) resetting the buffer's address pointer [page 10, lines 20-23] or disabling the printing motor while continuing to process the data in the receive buffer [page 6, line 35 to page 7, line 2; and page 10, lines 23-25]).

Thus, there is no conflict with the clearing operation of claim 1, which attempts to get rid of data already stored in the receive buffer, and the "data discarding means" of claims 4 and 12, which prevent new data from being written into the receive buffer.

With regards to claim 5, Applicants again emphasize the difference between setting/unsetting a data handling mode (which determines how the printer responds to situations or how the printer executes an operation, as

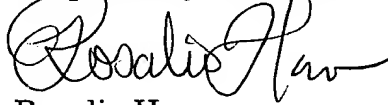
explained above in reference to the discussion pertaining to claim 2) and received commands, whose execution is immediate and which may further depend on handling modes previously set/unset within the printer.

Thus, the cited prior art does not teach or suggest the invention of claims 1-7. Furthermore, Claims 8-18 and 20-23 are believed allowable for similar reasons as stated above in reference to claims 1-5.

In regards to claims 19 and 20, Applicants respectfully point out that the cited prior art does not show, singularly or in combination, a conditional resending of print data . To remove any unintended ambiguity, Claims 19 and 20 are amended to better recite that the print data is resent following an on-line notification from the printer only if the host computer's state detector detected an off-line notification from the printer while it was awaiting the printing completed notification.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration of the present application.

Respectfully submitted,



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